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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/474,031	12/28/1999	ROBERT DUNCAN DOVERSPIKE	104172	1768

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EXAMINER	
HA, YVONNE QUY M	

ART UNIT	PAPER NUMBER
2697	9

DATE MAILED: 07/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/474,031	DOVERSPIKE ET AL.	
	Examiner	Art Unit	
	Yvonne Q. Ha	2697	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 May 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1, 3-5, 7-13, 15-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-38* is/are rejected.

7)☒ Claim(s) *25 and 28* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Amendment

1. The amended claims 1-4, 7-10, 12-20, the amended specification and new claims 21-38 have been entered. Claims 1-38 are pending.

Claim Objections

2. Claim 25 is objected to because of the following informalities: missing the colons after the word "comprising". Appropriate correction is required.

3. Claim 28 is objected to because of the following informalities: missing the colons after the word "comprising"; "at least ones" is not clear. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-31, 33, 34, 36-38 are rejected under 35 U.S.C. 102(e) as being anticipated by Chen et al. (US Patent 6,353,593).

Referring to claims 1, 13, 21, 25, 28, 31, 34, and 37, Chen discloses a method that restores communication in a mesh network between a first end node and a second end node (col.3, lines 39-42, figure 1 with source/destination nodes and working/protection paths), comprising: transmitting a communication signal over a first communication path comprising the first end node (col. 3, lines 39-42, figure 1 references 30), the second end node (figure 1,

reference 34) and one or more first intermediate nodes (figure 1, reference 32); detecting an error condition in at least one of the first end node and the second end node (col. 4 , lines 45-48, AIS is an alarm to indicate failure on the working path links, i.e. detecting an error which triggers the alarm); and rerouting the communication signal over a second path having been determined before the error condition is detected (col. 4 , lines 49-63, protection path is active by selecting virtual path connections), the second path including the first end node, the second end node, and one or more second intermediate nodes (col. 4, lines 60-67, col. 5, lines 43-51; figure 1, references 22, 24, and 46 source/destination, 32 intermediate node), wherein the second intermediate nodes are disjoint from the one or more first intermediate nodes (col. 6, lines 32-43, switching from working path to protection path, i.e. the data on working path is now routed to protection path which means the original node is then disjointed as the data routed on an alternate protection path); the second path further includes one or more second transmission lines each having a plurality of channels (col. 6, lines 44-59, VPC-path connection included VCC-channel connections are bridged onto working and protection transmission links to allow protection switching at destination), and at least one channel used to reroute the communication signal is determined after the error condition is detected (col. 7, lines 44-50, selecting channel connections with path connection for at least one of the transmission links).

not to use claim - Novelty

Referring to claim 3, Chen discloses all aspects of the claimed invention and further teaches sending one or more back-off commands to release at least one channel that had been assigned, after the error condition had been detected to carry the signal (col. 7, lines 44-50, selecting channel connections with path connection for at least one of the transmission links).

Referring to claim 4, Chen discloses all aspects of the claimed invention and further teaches the first and second nodes coordinate rerouting the communication signal over the second path (col. 3, lines 57-67, col. 4, lines 1-7).

Referring to claims 5, 11, 19, 23, 24, 27, and 30, Chen discloses all aspects of the claimed invention and further teaches the mesh network is an optical mesh network (col. 3, lines 31-34, OC-3 line is the bandwidth of the connecting transmission line).

Referring to claims 7, 15, and 17, Chen discloses all aspects of the claimed invention and further teaches the step of rerouting the communication signal includes issuing commands, after the error condition is detected, in a direction from the first end node to at least one of second intermediate nodes to bi-directionally assign channels in one of the transmission lines, and issuing commands, after the error condition is detected, in a direction from the second end node to at least one of second intermediate nodes to bi-directionally assign channels in one of the transmission lines (col. 4 , lines 49-63, protection path is active by selecting virtual path connections; col. 6, lines 32-43, switching from working path to protection path, i.e. the data on working path is now routed to protection path which means the original node is then disjointed as the data routed on an alternate protection path; col. 7, lines 44-50, selecting channel connections with path connection for at least one of the transmission link).

Referring to claims 8, 22, 26, 29, and 38, Chen discloses all aspects of the claimed invention and further teaches the step rerouting the communication signal includes: responding to a failure indication sent from the first end node to the second end node (col. 4, lines 45-48, AIS is an alarm to indicate failure on the working path links, i.e. detecting an error which triggers the alarm); and issuing commands from the second end node to the one or more second

intermediate nodes to bi-directionally assign channels along the second path (col. 4 , lines 49-63, protection path is active by selecting virtual path connections; col. 4, lines 60-67, col. 5, lines 43-51; figure 1, references 22, 24, and 46 source/destination, 32 intermediate node, i.e. links are bi-directional from source to destination and vice versa).

Referring to claims 9, 10, and 18, Chen discloses all aspects of the claimed invention and further teaches the step of rerouting the communication signal includes issuing commands from the first end node to the one or more second intermediate nodes to unidirectionally assign channel along the second path in a first direction (col. 6, lines 32-43, switching from working path to protection path, i.e. the data on working path is now routed to protection path which means the original node is then disjointed as the data routed on an alternate protection path; col. 6, lines 44-59 VPC-path connection included VCC-channel connections are bridged onto working and protection transmission links to allow protection switching at destination).

Referring to claims 12 and 20, Chen discloses all aspects of the claimed invention and further teaches channels are assigned to carry the communication signal over the second path using a contention technique (col. 7, lines 1-15).

Referring to claim 16, Chen discloses all aspects of the claimed invention and further teaches the communication signal is rerouted from the first communication path to the second path based on a communication of the second end node (col. 6, lines 44-59 VPC-path connection included VCC-channel connections are bridged onto working and protection transmission links to allow protection switching at destination; col. 7, lines 44-50, selecting channel connections with path connection for at least one of the transmission links).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 32-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (US Patent 6,353,593) in view of Ahmad et al (US Patent 6,359,857).

Referring to claims 32 and 35, Chen discloses all aspects of the claimed invention but failed to teach the identification of the second path is stored in first node. However, Ahmad discloses triggering a reroute on the basis of the detected domain identifier (col. 3, lines 10-15). Cell detect and copy of entire cell if it is and AIS cell (col. 8, lines 25-28). The local database updated and contained the information of intermdediate node, source or other nodes (figure 7, reference 93) where the ID of the nodes is stored (reference 96) and the ID of the nodes in the protection controlled by the current node, and all nodes in a given path of a given domain controlled by the current node (col. 8, lines 37-64). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teaching of working and protection paths and Ahmad teaching of using identifier for detection. Using the identifier will allow the downstream nodes to determine more easily whether the alarm is caused by a domain, which has a bypass path. The problem of unnecessary triggering can be overcome without complexity of cost. This provides a uniform solution for simple protection switching and more precise location information.

Referring to claims 33 and 36, Chen discloses all aspects of the claimed invention and further teaches the step rerouting the communication signal includes: responding to a failure indication sent from the first end node to the second end node (col. 4, lines 45-48, AIS is an alarm to indicate failure on the working path links, i.e. detecting an error which triggers the alarm); and issuing commands from the second end node to the one or more second intermediate nodes to bi-directionally assign channels along the second path (col. 4 , lines 49-63, protection path is active by selecting virtual path connections; col. 4, lines 60-67, col. 5, lines 43-51; figure 1, references 22, 24, and 46 source/destination, 32 intermediate node, i.e. links are bi-directional from source to destination and vice versa)

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Vaman et al. (US Patent 6,426,941) discloses hitless ATM cell transport for reliable multi-service provisioning
- Phelps (US Patent 6,392,992) discloses signal degrade oscillation control mechanism

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

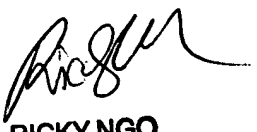
the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yvonne Q. Ha whose telephone number is 703-305-8392. The examiner can normally be reached on Monday-Friday 7a.m.-4p.m. Eastern.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 703-305-4798. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3988 for regular communications and 703-305-9051 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

YQH
July 25, 2003



RICKY NGO
PRIMARY EXAMINER